GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA

UNSTARRED QUESTION NO:4921
ANSWERED ON:26.04.2000
GENETICALLY ENGINEERED CROPS
ANNA SAHEB M.K. PATIL

Will the Minister of AGRICULTURE be pleased to state:

(a) whether Indian Council of Agricultural Research (ICAR) has developed geneticallyengineered cotton, rice and pigeon pea that are resistant to devastating pests;

(b) if so, the details thereof;

(c) whether these varieties are made available to farmers; and

(d) if so, the details thereof alongwith the details of other projects undertaken by ICAR under National Agricultural projects?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI HUKUMDEO NARAYAN YADAV)

(a) & (b): The Indian Council of Agricultural Research has developed genetically engineeredrice through transfer of insecticidal protein gene (Cry1 Aa) from soil bacterium, Bacillus thuringiensis (Bt), with the objective to impart resistance to stem borers. These transgenics are being evaluated, and the bioassay in the containment facility have shown that these carry the resistance to stem borers. These will be further evaluated in the containment facility followed by field trials before these are considered for release for general cultivation by farmers.
In cotton transgenics carrying Bt gene (Cry1 Ab) have been developed with the objectiveto incorporate resistance to cotton bollworms. These trangenics are being evaluated in glass house for resistance to bollworms.

In pigeon pea, no transgenic have been developed as yet. The work is at the initial stages (in tissue culture stage prior to transfer of gene).

(c) & (d) : No, Sir, To-date, no transgenic crop variety has been recommended for general cultivation by farmers. Production of transgenic lines is only the first step in the development of genetically engineered crop varieties. Transgenic lines need to be evaluated for genetic worthiness and biosafety before these are recommended for adoption by farmers.

Keeping in view the growing importance of plant biotechnology, Indian Council of Agricultural Research has initiated research in this field in important crops. The research is being supported through Plan Projects, Cess Fund Adhoc Projects and National Agricultural Technology Project. Transgenics for resistance to insect pests have been developed in tobacco, tomato, potato, brinjal and cabbage.